

AMENDMENTS TO THE CLAIMS:

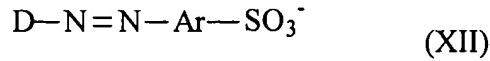
This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-37 (Cancelled)

38.(New) A copolymer comprising (a) one or more pendant group segments and (b) one or more polyol segments, each of said segments being linked to one or more further segments which may be the same or different,

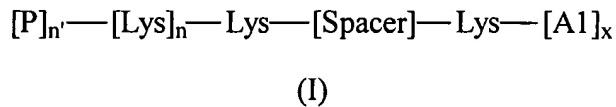
wherein said one or more pendant group segments are the same or different and are selected from:

- (i) siloxane segments;
- (ii) segments containing phosphoryl choline or a derivative or analogue thereof;
- (iii) segments containing a di- or trifluoromethyl group;
- (iv) heparin-like segments containing a group of formula (XII)



wherein D is an aliphatic or aromatic group and Ar-SO₃⁻ comprises one or more linked aryl and/or heteroaryl groups, at least one of the aryl and/or heteroaryl groups having an SO₃⁻ substituent; and

- (v) segments containing a group of formula (I)



wherein:

- [A1] is an inert amino acid;
- x is 0, 1, 2 or 3;

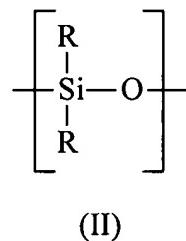
- [Spacer] is a fatty acid, amino acid, peptide or PEG;
- $[P]_{n'}-[Lys]_n$ is a dendritic structure formed from n lysine groups and terminating in n' groups P;
- n is an integer of from 1 to 15;
- n' is zero or an integer of up to 16; and
- each P is the same or different and is an amino acid or a peptide having up to 25 amino acids,

and wherein at least a part of each of said pendant group segment(s) is on a side chain of the copolymer.

39.(New) A copolymer according to claim 38, wherein the segments are linked via urea or urethane linkages.

40.(New) A copolymer according to claim 38, comprising one or more pendant siloxane segments.

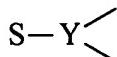
41.(New) A copolymer according to claim 38, wherein the pendant siloxane segment(s) comprise a linear siloxane, said linear siloxane comprising repeating units of the formula (II)



wherein each R is the same or different and represents an aliphatic or aromatic group.

42.(New) A copolymer according to claim 41, wherein each R is the same or different and represents an alkyl, alkenyl, alkynyl, cycloalkyl or aryl group.

43.(New) A copolymer according to claim 38, wherein the pendant siloxane segment(s) have the structure (III)

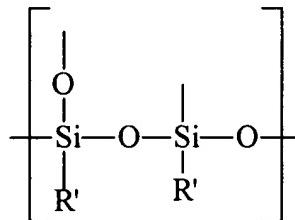


(III)

wherein S is a linear siloxane group, a silsesquioxane cage or a partial silsesquioxane cage and Y is an aliphatic group which is bonded to at least two urea or urethane linkages.

44.(New) A copolymer according to claim 43, wherein S is a silsesquioxane cage.

45.(New) A copolymer according to claim 44, wherein the silsesquioxane cage S consists of repeating units of formula (IV)



(IV)

wherein each R' is the same or different and represents an aliphatic or aromatic group and wherein one R' group is replaced with a bond attached to group Y.

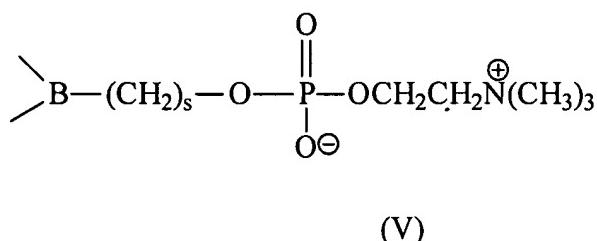
46.(New) A copolymer according to claim 45, wherein each R' is the same or different and represents an alkyl, alkenyl, alkynyl, cycloalkyl or aryl group.

47.(New) A copolymer according to claim 38 which comprises one or more pendant siloxane segments, and wherein the ratio of siloxane segment(s) to polyol segment(s) is 1:10 or less.

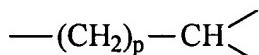
48.(New) A copolymer according to claim 38, which comprises one or more pendant siloxane segments having a molecular weight of up to 5000.

49.(New) A copolymer according to claim 38, which comprises two or more different pendant siloxane segments, each containing a silsesquioxane cage or partial cage.

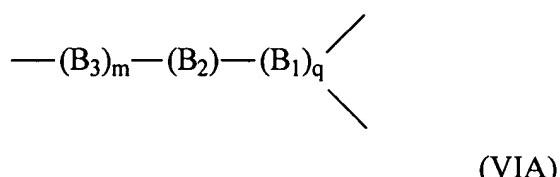
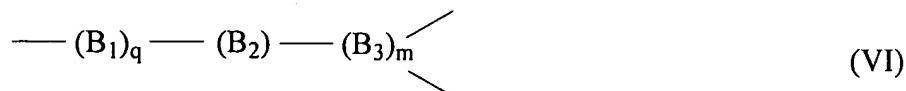
50.(New) A copolymer according to claim 38, wherein the segment(s) containing phosphoryl choline or a derivative thereof have the formula (V)



wherein s is 0, 1, 2, 3 or 4 and B is an aliphatic group of formula

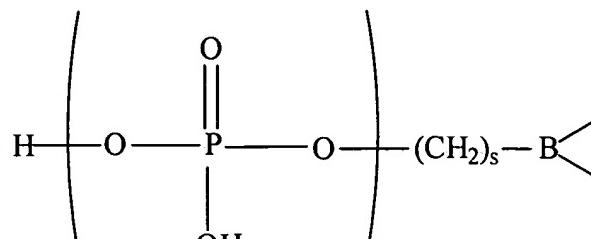


wherein p is an integer of from 0 to 8, or B is a group of formula (VI) or (VIA)



wherein each B_1 is the same or different and is a $\text{C}_6\text{-C}_{10}$ aryl, a $\text{C}_1\text{-C}_8$ alkylene, $\text{C}_2\text{-C}_8$ alkenylene, $\text{C}_3\text{-C}_6$ cycloalkyl group or a 5- or 6- membered heterocyclyl group containing 1, 2 or 3 heteroatoms selected from nitrogen, oxygen and sulfur; B_2 is a 5- to 10-membered heterocyclyl or heteroaryl group containing from 1 to 5 heteroatoms selected from nitrogen, oxygen and sulfur; B_3 is an aliphatic group; q is 0, 1, 2 or 3; and m is 0 or 1.

51.(New) A copolymer according to claim 38, wherein the segment(s) containing an analogue of phosphoryl choline have the formula (VII)



(VII)

wherein s and B are as defined in claim 50 and r is 1, 2, 3, 4 or 5, and wherein the one or more phosphate groups are, independently optionally present in the form of a salt.

52.(New) A copolymer according to claim 38, wherein the segment(s) containing a di- or trifluoromethyl group are straight or branched, C₂₋₁₂ alkylene groups which are substituted with one or more di- or trifluoromethyl groups and optionally one or more fluorine atoms.

53.(New) A copolymer according to claim 38 wherein the segments(s) containing a di- or trifluoromethyl group are siloxane segments, segments containing phosphoryl choline or a derivative or analogue thereof, heparin-like segments or segments of formula (I) which are substituted with a di- or trifluoromethyl group.

54.(New) A copolymer according to claim 38, wherein in the group of formula (XII) Ar comprises one or two linked aryl or heteroaryl groups selected from phenyl and pyrazolyl, Ar being substituted with one or two -SO₃⁻ groups and one, two or three further substituents selected from methyl, ethyl, methoxy, methylthio, nitro and dimethylamino groups; and D is a group D¹-D²-D³- wherein D¹ is an aryl or heteroaryl group which is unsubstituted or substituted with one, two or three substituents selected from methyl, ethyl and methoxy groups, D² is -NR'CO-, -CONR', -OCO-, -COO-, -NR'SO₂- or -SO₂NR'- and D³ is phenyl or a C₁₋₄ alkylene

or C₂₋₄ alkenylene group which is unsubstituted or substituted with one, two or three substituents selected from methyl, ethyl and methoxy groups.

55.(New) A copolymer according to claim 38, wherein the group of formula (XII) is a derivative of an Acid Yellow compound.

56.(New) A copolymer according to claim 38 wherein, in the group of formula (I), n is 7.

57.(New) A copolymer according to claim 38, wherein, in the group of formula (I), P is an amino acid or peptide in the D-form.

58.(New) A copolymer according to claim 38 which comprises two or more different pendant group segments.

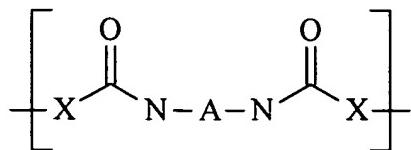
59.(New) A copolymer according to claim 38, further comprising (c) one or more chain extender segments, each of said chain extender segments being linked to one or more further segments, which may be the same or different.

60.(New) A copolymer according to claim 59, wherein said chain extender segment(s) are selected from amino acids, peptides, polypeptides and C₁-C₆ aliphatic moieties.

61.(New) A copolymer according to claim 60, wherein one or more of said chain extender segment(s) is an anticoagulant.

62.(New) A copolymer according to claim 60, wherein one or more of said chain extender segment(s) is RGD (Arg-Gly-Asp).

63.(New) A copolymer according to claim 38, wherein each segment is linked to one or more further segments by a group of formula



wherein each X is the same or different and is a nitrogen or oxygen atom and each A is the same or different and is an aromatic or aliphatic moiety.

64.(New) A copolymer according to claim 38, which comprises as component (b) one or more polycarbonate segment(s).

65.(New) A process for producing a copolymer according to claim 39, which process comprises polymerising, in any order,

(i) one or more pendant group segments as defined in any one of claims 1 to 19, the or each segment being bonded to at least one group selected from primary or secondary amine, hydroxyl and carboxylic acid groups;

(ii) a polyol;

(iii) an aromatic compound having two or more isocyanate groups; and optionally

(iv) one or more chain extenders selected from amino acids, peptides, polypeptides and C₁-C₆ aliphatic groups, each of which has at least one substituent selected from primary or secondary amine, hydroxyl and carboxylic acid groups.

66.(New) A process for producing a copolymer according to claim 39, said copolymer comprising as the pendant group segment a linear siloxane attached directly to the backbone of the copolymer,

which process comprises (i) reacting a polyol polyurethane with a strong base, and (ii) reacting the product of (i) with a siloxane.

- 67.(New) A copolymer obtained or obtainable by the process of claim 65.
- 68.(New) A process for producing a lined copolymer, which process comprises seeding cells onto the surface of a copolymer as claimed in claim 38.
- 69.(New) A lined copolymer obtained or obtainable by the process of claim 68.
- 70.(New) A moulded article comprising a copolymer as claimed in claim 38 or a lined copolymer as described above.
- 71.(New) A moulded article according to claim 70 which is an implantable device.
- 72.(New) An implantable device according to claim 71 which is a vascular graft.
- 73.(New) A method of treating a human or animal patient in need of the replacement of a body part, said method comprising replacing said body part with the implantable device of claim 71.